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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,480	07/29/2003	Masao Kano	2018-758	4677
23117	7590	08/11/2005	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			TRIEU, THERESA	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/628,480

Applicant(s)

KANO ET AL.

Examiner

Theresa Trieu

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-4,7,8 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3,7,11-13,16 and 17 is/are allowed.
- 6) ☒ Claim(s) 2,4,8,14,15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Office Action is responsive to the applicant's amendment filed on May 18, 2005.

Claims 2 and 11 have been amended. Claims 14-17 have been added. Thus, claims 2-4, 7, 8 and 11-17 are pending in this application.

#### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 2, 14 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed subject matter "the discharge groove and the at least one outlet are disposed entirely on one axial side of the plurality of vanes" in claim 2 is not supported in the original filed specification. This is a new matter rejection. Claims 14 and 15 are rejected by virtue of their dependence on claim 2.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**2. *Claims 2, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Linder (Publication Number GB 2,015,084).***

Regarding claims 2, 14 and 15, as shown in Fig. 3, Linder discloses a vane pump comprising a housing (7) that includes: a rotor chamber (not numbered; however, clearly seen in Fig. 3); a rotor (5) that is rotatable received in the rotor chamber and has a plurality of vane grooves (not numbered; however, clearly seen in Fig. 3); a plurality of vanes (9), each of which is radially reciprocally received in a corresponding one of the vane grooves of the rotor; an inlet (11) is communicated with each corresponding pump chamber to supply working fluid into the pump chamber; at least one outlet (12) that communicates between inside and outside of the rotor chamber; a discharge groove (14) includes a first end and second end (not numbered; however, clearly seen in Fig. 3); wherein the second end of the discharge groove is positioned away from the first end of the discharge groove in the rotational direction of the rotor; and the at least one outlet (12) extends directly from the second end of the discharge groove and is parallel to the rotational axis of the rotor (5); and the second end wall surface of the discharge groove (14) is flush with a closest portion of the inner wall surface of the outlet (12); at least a portion of the discharge groove (13) and at least a portion of each of the at least one outlet (12) being located radially outward of a sliding surface portion of the inner peripheral wall surface (6) of the housing.

**3. *Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by JP (Publication Number JP 63-098493).***

Regarding claim 4, as shown in Figs. 1-3, JP discloses a vane pump comprising a housing (1) that includes: a rotor chamber (6); a rotor (2) that is rotatable received in the rotor chamber

Art Unit: 3748

and has a plurality of vane grooves (3); a plurality of vanes (4), each of which is radially reciprocally received in a corresponding one of the vane grooves of the rotor; an inlet (7) is communicated with each corresponding pump chamber to supply working fluid into the pump chamber; at least one outlet (8) that communicates between inside and outside of the rotor chamber; a discharge groove (12) includes a first end and second end (not numbered; however, clearly seen in Fig. 2); wherein the second end of the discharge groove is positioned away from the first end of the discharge groove in the rotational direction of the rotor; and the at least one outlet (8) extends directly from the second end of the discharge groove and is parallel to the rotational axis of the rotor (2); and a closest portion of the inner wall surface of the outlet (8) is spaced away from the second end wall surface of the discharge groove (12) in the rotational direction of the rotor (2).

4. *Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by any one of Horioka et al. (Horioka) (Publication Number JP 07-049094) or JP (Publication Number JP 63-098493).*

Regarding claim 8, Horioka (as shown in Figs. 1 and 3) or JP (as shown in Figs. 1 and 2) discloses a vane pump comprising a housing (3 in Horioka; 1 in JP) that includes: a rotor chamber (8 in Horioka; 6 in JP); a rotor (2 in Horioka; 2 in JP) that is rotatably received in the rotor chamber and has a plurality of vane grooves (not numbered; however, clearly seen in Fig. 1 in Horioka; 3 in JP); a plurality of vanes (1 in Horioka; 4 in JP), each of which is radially reciprocally received in a corresponding one of the vane grooves of the rotor; an inlet (3a in Horioka; 7 in JP) is communicated with each corresponding pump chamber to supply working fluid into the pump chamber; at least one outlet (3b in Horioka; 8 in JP) that communicates

Art Unit: 3748

between inside and outside of the rotor chamber; a discharge groove (not numbered; however, clearly seen in Fig. 1 in Horioka; 12 in JP) includes a first end and second end (not numbered; however, clearly seen in Fig. 1 in Horioka and Fig. 1 in JP); wherein the second end of the discharge groove is positioned away from the first end of the discharge groove in the rotational direction of the rotor; and the at least one outlet (3b in Horioka; 8 in JP) extends directly from the second end of the discharge groove; the at least one outlet including first and second outlets; the first outlet extending generally parallel to a rotational axis of the rotor; and the second outlet extending perpendicular to the rotational axis of the rotor (2 – see Fig. 1 in Horioka; see Fig. 2 in JP).

*Allowable Subject Matter*

5. Claims 3, 7, 11, 12, 13, 16 and 17 are allowed.

*Response to Arguments*

Applicant's arguments filed on May 18, 2005 have been fully considered but they are not persuasive.

Regarding claim 8, applicants' argument that Horioka does not disclose a first outlet extending generally parallel to the rotational axis of the rotor (see Remarks, page 17, 3<sup>rd</sup> paragraph). The Examiner disagrees. Horioka clearly teaches that the at least one outlet (3b) extends directly from the second end of the discharge groove; the at least one outlet including first and second outlets; the first outlet extending generally parallel to a rotational axis of the rotor (see attached paper with remarks).

*Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

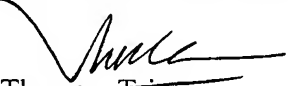
*Communication*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa Trieu whose telephone number is 571-272-4868. The examiner can normally be reached on Monday-Friday 8:30am- 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on 571-272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TT  
August 6, 2005



Theresa Frieu  
Primary Examiner  
Art Unit 3748



【図 1】

JP 07-049094

図 1

